Middlebury College

Your Family and Middlebury

Summer 1963

Editor's note: Dr. Stratton's achievements at Middlebury College during the past twenty years were reported in the Spring Issue of YOUR FAMILY AND MIDDLEBURY. *During May and June, President and Mrs. Stratton were honored by the Faculty, Staff, Alumni, Students and the Trustees of the College.*

HONORING PRESIDENT STRATTON

At a faculty reception held in the Egbert Starr Library in May for President and Mrs. Stratton, Dean of the Faculty, John G. Bowker, speaking for his colleagues said: "The ladies and gentlemen of the Middlebury College Faculty have planned this reception to honor you on the occasion of your approaching retirement as Mr. and Mrs. President of our College. We thought it particularly fitting that the end of a significant era in Middlebury's history be celebrated in this beautiful library, the Heart of the Campus, your proudest achievement. This is not "goodbye" for it is our good fortune that you have chosen Middlebury as your home. It is heartwarming to us all that after years of service to this College so many of our faculty friends find that here in Middlebury their personal ties and friendships are strongest . . . Our gift on this occasion has been selected with the hope that it will find a place in your new home and serve as a lasting expression of the high regard and honor we confer upon you tonight. This crystal vase was created by Steuben Glass and is named the Corolla. It was etched especially for you with the seal of our College. This form seemed particularly appropriate to us as the lower part of the vase suggests the little crown or garland in a flower which protects the floral elements of fructification. This, in the minds of the Faculty, is symbolic of the role of a good administrator. We join in every wish for your health, happiness, and Godspeed."

Among other honors received by President Stratton were: Honorary Degree of Doctor of Civil Law; Honorary Membership in the Class of 1963; staff dinner for Dr. and Mrs. Stratton with presentation of gifts and letters of appreciation; Honorary Membership in Blue Key; presentation of an inscribed silver bowl by the Alumnae Association; recipient of a bound set of THE NEWS LETTER for the past twenty years from the Alumni; presented with an Alumni Plaque; awarded a varsity letter and a lifetime pass to all future athletic events; given a set of bound copies of the *Campus*; annual ROTC parade held in Dr. Stratton's honor; and, the following resolution passed on June 10, 1963, by the Board of Trustees.

A RESOLUTION

The Trustees of Middlebury College wish to record their tribute to a man who has long directed the affairs of the College. Twenty years ago, Samuel Sommerville Stratton took over the leadership of Middlebury College at a time when war gripped our land, and when the fate of small, liberal arts colleges was most uncertain. The period that followed has been termed, quite fittingly, "The Stratton Era", characterized by academic prestige, a marked increase in the financial resourses, extensive physical development of the campus, and wise, long-term planning. No matter how modest a President may be, he must assume some of the credit for this happy situation. During these years, he has earned the respect and admiration of all who know him.

Neither we nor the President could possibly overlook the distaff contribution.— Marjorie Austin Stratton has been a gracious hostess, and a warm and understand-ing friend. Indeed, the Strattons have been a good combination; they have been good for Middlebury

Be It Resolved, therefore, that the Trustees of Middlebury College hereby declare their deep sense of indebtedness to President and Mrs. Stratton for long and faithful service to the College, and their hope that retirement will bring a full measure of happiness and satisfaction.

The Trustees further direct that this Resolution be inscribed on the permanent records of the College, and that a copy thereof be sent to President and Mrs. Stratton, and to their daughter, Nancy.

On our cover Middlebury's eleventh and twelfth presidents pause in the Old Chapel Room before the portrait of Jeremiah Atwater, the College's first president. President Stratton will retire on Sept. 1 at which time Dr. James I. Armstrong (right) will take over the duties of the presidency.

Total gifts and grants to Middlebury College for the year ending June 30, 1963 exceeded one million two hundred thousand dollars. Significant were the gifts for the permanent endowment of the College which were in excess of $825,000. This gratifying increase in endowment includes $424,149.66 for The Jean Thomson Fulton Professorship of Modern Languages and Literature, and $300,000 by bequest of Elbert S. Brigham, '03, for scholarships (See Page 35). The Samuel S. Stratton Fund in support of visiting lecturers had reached $15,128.88 on June 30.

Dr. Paul M. Cubeta has been named chairman of the Division of Humanities and Dr. Henry B. Prickitt has been selected as head of the Department of English, Speech and Drama.

Groups interested in holding alumni reunion dinners in their areas should write to Gordon C. Perine, Director of Alumni Relations for details.

Wanted for Abernethy Room in the Egbert Starr Library: a small Oriental rug sized from four by six feet up to 7' x 9'.

Thomas M. Mettee became the fourth Middlebury athlete of the past academic year to win All-American honors when he was selected recently for his performance in lacrosse. He received honorable mention at the midfield position on the 1963 All-American Lacrosse Team. Other Panthers honored during the year were: A. Keith Van Winkle, All-American first team in soccer; his brother, W. Davis Van Winkle, honorable mention in soccer; and Dates Fryberger named for the second straight year to the All-American Hockey Team.

Arthur L. Wollman, salutatorian of the Class of 1963, who majored in Bio-Chemistry and Mathematics, and was a letterman in lacrosse, completed his four years at Middlebury in three. He graduated magna cum laude with Phi Beta Kappa honors. On the basis of his achievement, he is one of five students chosen from all over the United States to begin a six-year medical and Ph.D course under a grant from Downstate Medical Center, Brooklyn, where he has already started to prepare himself for a career in clinical and research medicine. He plans to take his Ph.D. in Anatomy. Under the Downstate grant, he will receive full tuition plus $2,700 for six years.

The Paris Centre Culturel Americain of the United States Information Service recently purchased a color print of the Middlebury College film "Dimensions of a College." The film will be used in foreign student guidance and orientation, both in Paris and the provinces.

Your Family and Middlebury

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PROFESSOR HARNEST, HEAD OF THE CHEMISTRY DEPARTMENT

IS INTERVIEWED BY
YOUR FAMILY AND MIDDLEBURY ON . . .

The New Chemistry Curriculum

Q. In the spring issue of Your Family and Middlebury *which covered the Stratton Era, you reviewed changes and improvements during the last two decades in the Natural Science Division. In that description you referred to a completely revised curriculum in the Department of Chemistry which was introduced last fall. First of all, why did you feel it was necessary to effect major changes in the Chemistry program:*

A. In the initial stages of our study we were not sure whether major change or for that matter any change in the existing curriculum would be desirable. However, as any scientist who has kept abreast of contemporary developments knows, there has been a great ferment in the approaches used in the teaching of undergraduate courses in most disciplines falling in the general category of science. This has been especially true in Chemistry because of the tremendous increase in knowledge in the field during the last decade and the improved background of first year college students, as a result of efforts of many high schools to strengthen their science courses after the launching of Sputnik I. In fact, our experience at Middlebury indicates that this trend started before Sputnik, for under our long standing program of allowing exceptionally well prepared beginning students to enter sophomore courses, the number so admitted had been increasing annually, albeit at a slow rate. Perhaps the Program for Admission with Advanced Standing had a stimulating effect.

Q. What procedure did you follow in the study to which you refer?

A. About three years ago the Faculty of the Department of Chemistry recognized the need for a complete restudy of our curriculum. In a series of staff meetings held to consider the problem, it became apparent that insufficient time was available during the regular academic year to carry out the detailed study necessary to evolve a new program which would attempt to provide improved undergraduate training in Chemistry. We were fortunate in securing financial support for the study from E.I. du Pont de Nemours and Company. During the summer of 1961, Dr. Moyer, Dr. Pool, and Dr. Roberts conducted a complete revaluation of the Chemistry curriculum through individual study and daily group discussion. I consulted regularly with the study group and we contacted all Chemistry majors who had graduated in the last fifteen years for advice. We are most grateful for the fine response received from our Alumni. Many of their suggestions have been incorporated in the new curriculum.

Q. What factors did you consider in these discussions?

A. Factors which were felt to have a bearing on the problem were:

1. Recent advances in theory which may be profitably incorporated into undergraduate courses.
2. Better student preparation in Chemistry prior to college matriculation. This may be a major factor when two principal efforts on this front, "The Chemical Bond Approach" and "Chemical Education Materials (CHEM)" are felt in increasing numbers of preparatory schools in the next few years.
3. Needs of students who plan to seek advanced degrees in the field. Ideally, the undergraduate program should provide the fundamentals and tools to undertake a Ph.D. program without delay upon entering graduate school. (Middlebury is one of the 29 "highly productive" colleges providing Ph.D. candidates in the field of Chemistry, referred to by Lewis and Pino on page 5 of the National Science Foundation Memorandum No. 3, February 1960.)
4. Modern tools and ideas on the frontiers of Chemistry.
5. Integration of independent study into the undergraduate curriculum—the research concept.
6. In addition, we considered our obligations as a service department to the other sciences and to students who plan to major in other divisions.

Evolution of a new Chemistry curriculum was the direct result of this study.

Q. Is this program similar to those at other colleges which have been revised recently or is it unique to Middlebury?

A. Some features such as introduction of certain new courses and dropping of others are similar to revised programs elsewhere, but the most important innovation is, I believe, unique. I am referring here to the discontinuation of the traditional year survey course in General Chemistry and institution of a one semester course in *Fundamentals of Chemistry* designed to qualify the beginning student to enter a first course in Organic, Analytical, Inorganic, or Physical Chemistry in the second semester of his college career. The course

selected depends on the student's background, especially in mathematics, and his personal interests and objectives.

Q. Does this mean that well prepared freshmen will no longer be admitted to more advanced courses?

A. Indeed not! In fact we expect many more freshmen to qualify for advanced courses in this program. Freshmen with above average preparation in Chemistry are encouraged to omit the Fundamentals Course and in their first semester of college start their study with one of the second level courses mentioned earlier.

Q. How may freshmen qualify for these courses?

A. To qualify for admission to one of these courses, the student must secure his high school teacher's recommendation and this, we believe, is also a unique feature of our plan. To aid the teacher and student in making an intelligent decision, a brief description of the four second level courses open to freshmen and a more complete description of topics covered in the one semester Fundamentals course is sent to the student before graduation from high school. If the teacher feels the student is qualified to begin one of the more advanced courses, he is asked to write a letter of recommendation to the department chairman. It is expected that a favorable recommendation will be supported by a good high school record and college board scores. As a final check, the student is required to pass a test administered by the Middlebury Chemistry Department.

Q. Did you have many freshmen enrolled in these courses this (first) year?

A. Yes, we had more than expected. A total of 113 freshmen enrolled in Chemistry courses and of these 28 or 24.8% were admitted to either beginning Organic or Systematic Inorganic Chemistry. The most we had ever admitted to advanced courses in the previous curriculum was three.

Q. Were they able to handle the work satisfactorily?

A. Yes, we are pleased to report that none of the freshmen in these second level courses failed at the end of the first semester. We can't say the same thing concerning the upperclassmen, however, for two of them failed Organic Chemistry. In that course there was a better basis for comparing freshmen versus upperclass performance because there were 50 upperclassmen and 13 freshmen. It is interesting that the highest mark in the course in February was earned by a freshman and that the class average for the freshmen was almost two points higher than the upper classmen. Strangely enough the tables have been exactly reversed on class averages in the second semester but of the three A's earned this June, two were earned by freshmen.

Q. Since space is limited, could you briefly summarize just the more important of the additional features of the new curriculum.

A. That is difficult for a professor to do but in capsule form, we have introduced or modified courses to emphasize modern developments, theories, trends, and tools in Chemistry. Three of these are either new or represent consolidation of material covered in several courses previously. They are:

(a) *Instrumental Analysis*, a third semester of Analytical Chemistry in which the theories of separation and determination by instrumental methods are discussed in class and then put into practice in the laboratory using modern instruments.

(b) *Physical Chemistry III*, one semester of Advanced Physical Chemistry emphasizing atomic and molecular structure and theories of chemical bonding based on wave mechanics.

(c) *Advanced Organic Chemistry*, a one semester course, in addition to our regular year course in Advanced Organic, which gives an introduction to Physical-Organic Chemistry.

Q. How does the required senior Independent Study program fit into your plan?

A. As indicated earlier one of the factors motivating our study in the first place was integration of the institution-wide senior Independent Study program into the Chemistry curriculum in a manner which will foster the research concept. As a means to this end, each senior in the Chemistry Department reads in depth on a topic of interest, during the summer between his junior and senior years, then conducts a seminar on the topic before his colleagues and the faculty during his senior year. Besides his seminar, each student plans and executes a project of a research nature. It is expected that generally the project will include laboratory work as well as library research. Finally the student is expected to prepare himself for a General Examination, oral and written, to be taken at the end of his senior year.

Q. One final question—what are your "expectations?"

A. We hope this new program will provide all Middlebury students who elect courses in Chemistry with a stimulating and challenging experience in the field. We hope also that it will provide our own Chemistry and other science majors with a better preparation for graduate school or positions in industry, government, and research institutes, but we will not hesitate to make further changes and modifications as we gain experience or as new needs develop.

A Biologist Analyzes College Admission Standards

By Dr. John T. Bonner

A professor is, by the German definition, "a man who thinks otherwise," and here Your Family and Middlebury's *guest author Dr. Bonner, Professor of Biology and former member of the Admissions Committee at Princeton, takes a long, literate and skeptical look at the whole selection process. He questions if the present mode of testing seeks out, let alone wisdom, any attribute except that of passing its own unique tests, and cheerfully admits that he himself probably wouldn't recognize a potentially great biologist if he met one—at the age of 17.*

One of the most frightening aspects of the world today is the problem of over-population. It affects us in many ways and no matter where we turn we see ourselves surrounded and trapped by the rising tide.

These gloomy thoughts can appear in the most unlikely places. A few years ago I was on the library committee of our library, which has a new and large central building. One of our prime concerns was the fact that the number of new books and journals appearing each year was increasing so rapidly that soon the shelf space would be used up. Too many people produce too many books and even libraries have their acute population problems. At the moment there is little that can be done about it except to purchase books wisely, but mostly more books are bought each year and there is a minimum of selection.

The same problem is far more acute (because it involves people, not books) in the admissions committee of a university or a college. While it is true that many larger state universities are increasing the numbers of students admitted each year at a fast rate, most privately endowed universities and colleges are, primarily because of limitation in facilities, increasing the number of students to a very limited extent.

This means (and we are all well aware of the problem) that the number of admission applicants turned down by private liberal arts colleges is increasing steadily. In other words, those that make the grade and enter are an increasingly select group since each year they represent a smaller fraction of the total applicants.

As soon as the idea of selection appears, a biologist pricks up his ears. In nature there is the "survival of the fittest" in the form of Darwinian natural selection (which originated as an idea from Malthusian over-population), and in domesticated animals and plants there is artificial selection to produce fatter hogs or frost-resistant wheat. In both cases there is always one character, or better, one set of characters, that are selected and favored. This is especially obvious in domestic animals, where, for instance, if a dog breeder wants to produce better retrievers, he selects those that retrieve best and breeds them.

This leads us to the prime question that sorely needs asking: What are the characters for which offices of college admission are selecting? How do those that enter differ from those that fail? Before we rush to any easy and hasty answer (such as the "in" group being more intelligent) let us examine the situation carefully.

To BEGIN WITH, what information does an admission committee *see*? The usual folder on an applicant will consist of a set of college board scores; perhaps a National Merit Scholar rating; his or her school record including a statement of the school teachers or principal; a statement by the student concerning his future hopes; and usually the report of an interview with some person connected with the university.

There is a general feeling about the college board and Merit Scholar-type objective examination that the

amount of information it gives is severely limited. Its greatest success is perhaps in the estimation of mathematical ability. The main difficulty is that what it really tests is one's ability to take objective examinations, and what this means in terms of one's brain power is obscure to say the least. It is like trying to portray the meaning of the Bible with a 10-word vocabulary.

Another difficulty is its great emphasis on *speed*. One's score directly depends upon the rapidity of the answers, but it has always been a mystery to me why speed should necessarily bear any relation to the soundness or the depth of one's thoughts.

Admissions officers are on the whole well aware of the shortcomings of these tests and consider their importance secondary. Very low and very high scores are helpful indications of whether the student will be a failure or a success at college, but even this rough guide is not thought very useful without all the other supporting information.

The school record and statement from teachers are perhaps the most helpful, provided the admission office knows the school and its students. For the most part the statement by the student (or the essay for the college board examination) is not too helpful unless it is outstandingly foolish or infantile, but this is a rare event.

The interview is perhaps the most debatable issue. A half-hour talk with an individual, no matter how skilled the interviewer, is not enough to discover the inner workings and potentialities of even a brash applicant, let alone a shy one. The interview is a highly intuitive affair and it depends upon the immediate reaction of both people to each other. Not only does it demand that the interviewer be both unprejudiced and perceptive, but he then must convey his insight, his impression on paper so that a committee can understand his reaction. The personal interview is sometimes the best way of gauging a man and sometimes the worst, and it is very hard to know which of the two it has been for any particular interview. In other words, the risk here is very great, even though in some cases the rewards can be high.

A wise dean of admissions knows all these difficulties and many more besides. He also knows that he and his staff have to read thousands of folders or case histories in a very limited, intense period of time. And to make matters worse the number rises each year. He is faced then with rather inadequate information on too many cases and from this he has to arrive at a definite number of "admits" versus "not admits." It is a staggering and thankless task that requires all the wisdom and fortitude that a good dean can muster, and even then he must feel a deep sense of inadequacy in the whole system.

LET US NOW return to our key question: What are the characters for which offices of college admission are selecting? From what has been said we can hardly answer the question adequately. Certainly there is some selection for scholastic ability, of which school performance is given most weight. There is also some selection of "fine boys" or some such ill-defined character traits, over the unpleasant boors—at least when scholastic ability is roughly equal.

This amounts to saying that the criteria for his selection are a rather inadequately documented guess as to his future scholastic performance in college and an even more uncertain guess as to his general congeniality among his college friends. These criteria are indeed convenient for a happy university life. The faculty will have conscientious and rewarding students, the deans will have few academic failures, and everybody will be happy with the amenable "fine boys."

Let me ask another simple, but perhaps more pointed question: Are these the most desirable criteria? Is it possible that his performance, say 10 years after graduation from college, may be more important than what he does in college? There is a tacit assumption that performance in college may be equated with that of later life, but obviously this is not necessarily so.

Colleges generally do worry about their alumni and whether they make a mark in the world, but there is no way, at the moment, of correlating success in later life with admission qualifications. We have already said that admission qualifications are hard to grasp and measure, and surely we would find similar if not worse difficulties in evaluating success in later life. A man may be the head of a large corporation because his father retired or because he worked up from the bottom, and how does one compare the success or performance of an archeologist with that of an abstract painter, or a judge? Obviously, I cannot offer a solution to this problem, but from it I would argue that our present criteria of fine boys with good grades may not necessarily be the best admissions qualifications.

THE one exception might be the applicants who show strong aptitude in mathematics. This is a phenomenon that does show itself on tests, and it is an ability, once possessed, that is retained. The man with a perfect score in his mathematics test is a good bet for a first-rate mathematician or physicist or engineer. Yet despite the relatively high predictability, it is not infallible. A friend of mine who is in a department of physics of the highest caliber told me that one of their most distinguished staff members had been educated elsewhere because he had been refused admission as a young student in his own department; his academic record had been below standard.

I do not mean to imply, here or elsewhere, that if one is not a mathematician, and one does have high grades, that this precludes success in the future. Obviously such a position is nonsense. I would say rather that there is

certainly not a perfect correlation between a non-mathematician's (and from now on I shall only be referring to that group) college or school grades and later performance. It might even be, if the matter were studied statistically, that more successful men were good students than not.

But my point is that, because of the sudden increase in the world population, universities and colleges are now taking only the students with high grades. Since many successful people were students with low grades does this mean that fewer successful people, fewer people who make real contributions to our civilization, will come from liberal arts colleges or universities? It may well not be so, but before we forget the problem let us examine the situation from a biological point of view.

We take longer to reach maturity than any other animal. The period of dependence upon parents is exceptionally long, but most important, the period of *learning* is very long. It was found by B. Rensch in some experiments on learning capacity in large and small strains of chickens that the larger ones (with large brains) took longer to learn than the smaller ones, but could learn more. We presume from this that the longer the period of plasticity or immaturity, the longer the period of learning, and therefore possibly the greater the ultimate accomplishments in capacity. If a baby chimpanzee is raised with a human child (as has been tried on a number of occasions) they keep apace in the first year or so; in fact the ape surpasses the human. But by the time the human being is at college still learning, the chimpanzee has long since become set and shriveled in its ways.

From these facts, I cannot become alarmed when I hear that a child is slow to learn to read in first grade. But educators of small children are also well aware of the fact that an absence of precocity is of doubtful significance as far as the child's future school performance is concerned.

To carry the argument further, there would seem to be no harm in slow school work, or awkwardness in college work. Would not the ideal person be one whose mind, no matter how laboriously in the beginning, never stops learning, never closes, never atrophies? Would we not expect that person to continue to do significant things in the life for which he has been prepared? And, furthermore, is it not possible that the fast starter could be a fast finisher and that he becomes mentally congealed sooner in life?

Again the mathematical genius is of interest here. So often they are precocious and according to my mathematical friends, the great ones produce their real flashes of creative discovery at a very early age and not in later life. Precocity here is not an avenue to mediocrity—it only means, we might assume, that the greatest achievement will occur early, while in slower starters their period of creativity will span a great time. If a man is to be a theoretical physicist it makes no difference when he makes his discovery that wins him the Nobel Prize, but we would like the President of the United States to be at the peak of his powers when in office. This does not mean that all slow starters are intelligent or that only slow starters make good Presidents. The only point is that slow starters may, and often do, achieve great heights in their careers, and are private colleges willing to forsake them completely in the future?

The fact that this group is real and not fiction can be brought home in many ways. The easiest one is to remember back to one's own college days and recall who one thought at that time were going to be the successful giants of the future and then compare those predictions with the cold facts of 20 or 25 years later. It is so often true that those on the crest of the wave both in their intellectual promise and in other ways, dropped along the wayside, and some small nobody who was hardly remembered as an undergraduate is now a famous playwright or has solved some great medical problem or is a United States senator.

Or put the matter another way. I have not made a survey of all the great men in history who did poorly at school, but there are many of them and one example would suffice. Charles Darwin is one of the greatest geniuses in the Nineteenth Century, who molded the theory of natural selection practically as we know it and respect it today. His book, *The Origin of Species*, which describes the theory, is considered one of the great books of our civilization, and Darwin himself was buried in Westminster Abbey, an honor he richly deserved but could not enjoy. Yet this Olympian of the intellect, this towering giant of our whole culture, could never have passed the admission qualifications of one of our more restrictive liberal arts universities. His personality would have been considered adequate although unexciting (the report from his 30-minute interview), but his school grades were impossibly low.

Of course, in his youth no such problem existed and he did enter Cambridge, after an unsuccessful stab at medicine, but he did not distinguish himself there. He found pleasure and enthusiasm for some nature walks and beetle collecting, but nowadays we expect our children to demonstrate such fancies in Cub Scouts, not in college.

After Cambridge, and not until well into his four-year voyage on the *H.M.S. Beagle*, did his real awakening, his real growth, occur. Undoubtedly the many seeds planted in Cambridge sprouted and gave him the necessary background to proceed onto his remarkable observations and conclusions. But here is an example of

a late starter for whom we would no longer be willing to wait. One must have flowered at school, before college, in order to be accepted. There is nothing in our system that recognizes the Darwins that flower after college.

THESE problems seem especially great because there seems so little that can be done about them. It is not only that we find it difficult to assess a man's intellectual potentialities, although this is the easiest of the difficult tasks, but it is also that we find it hard to assess his real nature, his motivations, his imagination, his drive, his balance, his emotions. And even if we could assess all these things we would then have to be able to predict how they will change with time and know what ones are the ingredients of successful achievement.

And here we would have to be sure in our own minds what is *success*. Is it money or power, or creativity in the sciences or the arts, is it renown, is it a happy married life with a vigorous growing family, is it simply peace within oneself, or is it all these things and more besides? It is small wonder that deans of admissions have problems.

A friend of mine suggested in jest that we forego all tests and interviews and simply look into the man's heredity. We look into the activities and achievement of his parents and grandparents and if we like them we admit. As outrageous as this suggestion is, in some ways it is more logical and might even be at least as effective as the present system.

The real difficulties it presents are that we would then certainly end up entirely with boys from well-established family backgrounds, since this is almost a prerequisite. The boy with great potentiality, whose parents were immigrant peasants from central Europe, would automatically not qualify and this quite correctly goes against all our cherished and well-founded democratic principles.

Such a peculiar system of selection also serves to emphasize another pertinent point. It is still impossible today to separate satisfactorily, for any one individual, those endowments that come to him by heredity and those that come by environment.

This so-called nature-nurture problem has gone through many cycles of change, and 30 years ago heredity was held as the key. We were taught that the Jukes and the Kallikaks were pedigreed families of generation after generation of criminals and delinquents of the most sordid variety, and that the Galton "family" (of which Darwin was a relative) were generations of outstanding individuals. Today we would argue that environment may be equal or more important, for obviously Galton's family maintained cultural traditions for a series of generations that were somewhat different from the murder, larceny, and rape of the Jukes and the Kallikaks. In other words, family background can mean two things: It can mean a hereditary contribution and an environmental one, but we do not know how much of each contributes to the make-up of an individual.

It is true, however, that college itself is an environment which may be conducive to the further development of a student. It may help more those from inadequate backgrounds than the others, but even here it is hard to predict what effect college life will have on any one person, no matter what his heredity or his social background. For some, certainly, it is a place where they learn to *glow*, but now we are asking them to glow first.

If we look for more practical ideas on what to do about it, the going becomes more difficult, and I can only make a few hesitant suggestions, mostly negative in character.

In the first place, there are those who believe that no matter how complex the problem, a suitable test can always be devised and all the points I have raised can be treated statistically. It certainly would be wrong to discourage scientific progress, and the study of achievement and personality tests should continue and be encouraged. But one would hope that a sense of humility would prevail and that the truth be the only guide. At the moment we do not have such tests nor are they sighted even on the distant horizon. Let us, therefore, tolerate no arrogance on the matter of solving our problems by tests.

Also, there is no justification for allowing the interests of only one pressure group to prevail. It is obvious in many cases: One does not want just alumni sons, just athletes, just mathematicians, just boys from Connecticut.

BUT THERE IS one pressure group that is very strong and located on the spot. It is the faculty. It would be well for us to look for potential and not just smooth and slick performance; it is up to us to unlock and unfold those worthwhile abilities that sometimes do not spring out of their own accord. No one can be made to tolerate stupidity and shallowness, but we should clearly see the difference between this and an inner struggle.

THE MAIN THING is not to avoid or turn our back to a problem because it is too big for us. We must not say or think we are doing the right thing just to hide the fact that we do not know what really is the right thing. If we do not keep it before us and continue to seek ways of coping with it, the character of our alumni body will change simply by this unnatural selection. It will mean perhaps that the best teachers are to some extent expending their efforts on the students that need them least. It *(Please turn to back cover)*

With Our Faculty

By Professor John G. Bowker, Dean of the Faculty

ALTHOUGH only four teachers are leaving Middlebury, the fall term will find the usual number of new faculty faces. Eight members of the faculty have been awarded leaves of absence during 1963–64:

Dr. Harold B. Hitchcock (Biology) has been granted a sabbatical leave and will spend the year at Stanford University. During this summer he is completing his research project on the migration of bats in the Northeast and will leave for the West with his family in September.

Dr. Pardon E. Tillinghast (History) has sabbatical leave and plans a year's study at Cambridge University to do research for a book on Nicholas of Cusa, a 15th century cardinal. His family will accompany him to England and his three daughters will attend school in Cambridge. Prentice-Hall has recently published Dr. Tillinghast's first book, *Approaches To History*.

Dr. Chung-Ying Chih (Physics) has been granted a leave of absence. He will be in Newtown, Connecticut and plans to write a physics text in an area which he feels has been neglected.

Dr. Howard M. Munford will be a Fulbright Lecturer and Conduct Seminars in American Literature at the University of Freiburg, Germany. His family will accompany him. This summer finds the Munfords in California where Dr. Munford is teaching at San Francisco State College.

Mr. William N. Castor (Political Science) also has a Fulbright Grant. He will lecture at University College, Addis Ababa, Ethiopia.

Mr. James G. Chapman (Music) is one of forty faculty members in various fields from colleges and universities throughout the United States to be honored with a generous award by the Danforth Foundation. He plans to complete his doctorate at New York University. Four hundred and sixty-one nominations were made for the forty awards. Dr. Visvaldis Klive (Philosophy) will return to Middlebury in September having earned his Ph.D. at Columbia University, under a similar Danforth Grant.

Dr. Werner Neuse (German) will be on sabbatical leave the first semester and again take up the responsibilities of student adviser at the Middlebury College German School in Mainz, Germany. During his absence, Mr. John S. Roberts, who has been teaching at Middlebury since the death of Mrs. Neuse last October, will be in charge of the German Department.

Mr. James M. Watkins (French) will be on leave for the entire year. He and Mrs. Watkins are to spend the year in France. During the first semester he will direct the Middlebury Graduate School in Paris and for the remainder of the year he will be in Normandy completing research for a new text book.

FOUR faculty members were recipients of du Pont Summer Awards this year. These will be the last such awards provided by funds from the du Pont de Nemours Company. For several years the College has received a supplement to the Chemistry Department Grant designed to support research in "other disciplines important to the education of scientists and engineers." The duPont Company is to revise the basis for its support to Liberal Arts Colleges.

Dr. Howard Woodin (Biology) will pursue a project which he began in 1961 under a N.S.F. Grant. He plans to develop and improve instruments that will record transparency of water to a depth of at least 100 feet in fresh-water lakes and to use such instruments to determine the density and position of migrating plankton.

Mr. Edward A. Martin (English) has received a Grant to enable him to study twentieth-century American satire with attention to sources, history, theory, and bibliography. His search for material will take him to New Haven, New York City, Baltimore, and Washington. He plans to publish in the fall.

Mr. James G. Chapman (Music), who is to be on leave for the 1963–64 year as mentioned previously, has been awarded a Summer Grant to prepare for the publication of material from the works of Pierre Moulu, a composer of the sixteenth century. The early printing of his works, as was normal for the period, often represented variant readings that reflected style characteristics peculiar to a specific geographical location. Mr. Chapman intends to collect and collate these various sources and attempt to arrive at a working set of comparative stylistic principles. His chief source is microfilms which must be obtained from several European libraries.

Dr. Vincent H. Malmstrom (Geography) has been awarded a du Pont Grant to enable him to devote his summer to the study of Statistical Techniques as applied to Geographic Research. Geography is rapidly becoming a discipline science and Dr. Malmstrom has become increasingly aware of the necessary reliance on mathematical procedures to assure validity of conclusions in regional analysis.

Dr. Robert F. Reiff (Fine Arts) was unable to carry out his summer project in 1962. He is now at work on the anthology of writings of architects, supported by a du Pont Grant.

Dr. David K. Smith (Economics) has published the results of his research in 1962 in which he studied the problems of the small businessman in Vermont. He was sponsored and supported by The Associated Industries of Vermont and the Vermont Bankers Association, and the booklet "The Financial Environment of Vermont" resulted.

Dr. Smith and **Dr. John Craven** (Economics) are studying the use of computers this summer under a Grant from the General Electric Company.

Holt, Rinehart and Winston has just published **Dr. Paul Cubeta's** (English) new text, "Modern Drama for Analysis."

Dr. Walter A. Moyer (Chemistry) has been awarded a National Science Foundation Fellowship which is making it possible for him to attend a six week Institute on History and Philosophy of Science and Mathematics at American University in Washington, D. C.

Dr. Bruce B. Peterson (Mathematics) has been awarded a Summer Research Participation Grant by the National Science Foundation. He is at the University of Oklahoma.

Dr. Robert Reiff (Fine Arts) has compiled a Dictionary on Art, to be published soon by McGraw-Hill Company. The book contains more than 100 essays featuring biographical material and stylistic analyses of specific artists. General trends in the art world such as Impressionism, Post-Impressionism, and Surrealism are considered in the work.

The many former colleagues and friends of Professors Frank Cady and Frank Howard were saddened by their deaths this spring.

Middlebury's Long-Time Faculty

HOWARD M. MUNFORD, '34, Professor of American literature, is an articulate and distinguished lecturer and teacher.

A native of Des Moines, Iowa, he has been a member of the Middlebury faculty for the past twenty-two years. He earned a Master's Degree at the College's Bread Loaf School of English in 1939 and though his doctoral studies were interrupted by three years service as an officer in the Navy during World War II, he was awarded his Ph.D. by Harvard University in 1951.

Dr. Munford not only attains the educational objective of making students aware of intellectual activity, but does so in a human, personal way. As one of his students puts it:

"Aside from the intellectual stimulation which we receive from Professor Munford, we can't help but feel the warm and personal interest he manifests in every contact we have with him."

During a recent summer of teaching at a college in California, teachers taking graduate courses with Dr. Munford commented on his "outstanding scholarship and unusual ability to communicate a mature appraisal of American culture, as reflected in his courses on the American Novel and the American Experiment." One of his graduate students noted that "the course in the American Experiment is the most wonderful revelation of American culture that I have ever had."

"Teaching must be the most difficult of all occupations and potentially the most rewarding," Dr. Munford believes. "What the teacher might accomplish is so tremendous and what he succeeds in doing of necessity falls so far short. A sense of failure must be endemic to the profession, even when the teacher has the finest students as I have had over the years at Middlebury. The reward comes when on occasion he sees the enthusiastic light in his own eye reflected back in the eye of a student, and that," said Dr. Munford, "is a reward which more than repays any amount of effort."

During the 1963–64 academic year he will be a Fulbright Lecturer at the University of Freiburg in Germany. In 1955 Dr. Munford held a Fulbright Lectureship in American Literature and Civilization in Finland at Abo Academy, Swedish speaking, and Turku University, Finnish speaking. In the summer of 1958 he was a member of a delegation of professors to the USSR.

Commenting on Dr. Munford's participation as a Lecturer on American literature in the U. S. Educational Exchange Program in India six years ago, a spokesman for the Department of State said that while Dr. Munford was taking part in a travelling symposium on American writers in various cities in India, the U. S. Embassy at New Delhi commented on the straight forward, scholarly and clear talks made by the Middlebury professor as he introduced his audience to an approach to literature that was, for the most of his listeners, wholly new and "obviously exciting."

A special honor was given Professor Munford in the form of a post-doctoral Faculty Fellowship by the Fund for the Advancement of Education set up by the Ford Foundation for research outside his own field. With the realization that literature embraces everything with which we live and that it must be interpreted in its modern context, he spent the college year 1952–53 studying the philosophy of science at the Stanford University library.

Howard Munford has authored several articles including a series of eight articles on American literature for *Huvustadsbladet*, Helsinki, Finland. Some of his other articles include: "Henry Adams and the Tendency of History," *New England Quarterly*; 'Howells and Lowells: The Disciple Proves Independent," *PMLA*; and, "Robert Frost's 'The Subverted Flower'," *The Explicator*.

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1963 College Calendar

FIRST SEMESTER

September
12—Thursday, Freshman Week begins
15—Sunday, Freshman Convocation (10:45 a.m.) Mead Chapel
16—Monday, classes begin (8 a.m.)

October
12—Saturday, Alumni Homecoming Day (College in Session)
19—Saturday, Parents' Weekend (College in Session)

November
2—Saturday, Norwich football game away (Classes end at 11 a.m. 8, 9 and 10 o'clock classes at usual hour, 11:00 classes at 4:00 p.m. on November 1)
27—Wednesday, Thanksgiving Recess (12 noon) begins

December
2—Monday, classes resumed (8:00 a.m.)
14—Saturday, (12 noon), Christmas Recess begins

1964

January
6—Monday, Classes resumed (8:00 a.m.)
18—Saturday, First Semester classes end
20—Monday, Final Examinations begin
29—Wednesday, Examinations end

SECOND SEMESTER

February
3—Monday, Second Semester classes begin (8:00 a.m.)
22—Saturday, 1:00–4:00 p.m. Classes same as Thursday p.m.
27—Thursday, (4 p.m.) Winter Carnival Recess begins

March
2—Monday, classes resumed (8 a.m.)
28—Saturday, Spring Recess begins (12 noon). (Easter, March 29)

April
6—Monday, Classes resumed (8 a.m.)

May
23—Saturday, Classes end
25—Monday, Final Examinations begin

June
3—Wednesday, Examinations end
6—Saturday, Class Day
7—Sunday, Baccalaureate
8—Commencement

1963 Parents Weekend Program

Friday, October 18

3:30 p.m.–10:00 p.m.	Registration—Redfield Proctor Hall for Parents arriving Friday
3:00 p.m.	Freshman Football—Amherst
8:30 p.m.	Play—"The Importance of Being Earnest" by Oscar Wilde, Wright Memorial Theatre

Saturday, October 19

8:00 a.m.–12:00 p.m.	Classes open for Parents (within limitation of classroom capacity)
9:00 a.m.–12:00 p.m.	Registration—Redfield Proctor Hall.
10:00 a.m.–12:30 p.m.	Student-Faculty Art Exhibit, Carr Hall
Noon	Varsity Soccer—R.P.I.
12:15 p.m.	Parents Luncheon—Memorial Field House (Parents only), Parents will be guests of the College
1:30 p.m.	Varsity Football—Bates
4:15 p.m.–5:45 p.m.	President's Reception for Parents—Le Château
8:30 p.m.	Play—"The Importance of Being Earnest" by Oscar Wilde, Wright Memorial Theatre

Sunday, October 20

10:45 p.m.	Chapel Services Mead Memorial Chapel

A BIOLOGIST ANALYZES COLLEGE ADMISSIONS STANDARDS

(*Continued from page 9*)

will mean perhaps that the vigor of selective colleges will decline (for they did not think enough about what they are selecting) and the public schools and the state colleges will grow stronger because, by their very size, they failed to weed out the "wrong" man.

To me there is one pleasant thought in this distressing picture. It is that with all our science today, human beings, like spring in the poem of E. E. Cummings, cannot be measured. We can make all the generalizations we wish, based on the most elaborate statistics one can find, and all that is needed is one man with his particular gifts to show how wrong are the statistics and the generalizations. Each man is an individual and he will succeed or fail because of his own inner self and not just because of his heredity, his family background, his school, or his college. Everyone has a chance because each one of us is *one* and not an average of many.

Your Family and Middlebury is pleased to have Dr. Bonner as a guest writer for this issue. He is a Professor of Biology at Princeton where he also served on the University's Admissions Committee. Dr. Bonner is the author of four books, the latest of which is *The Ideas of Biology* (Harper). This article is reprinted from *The Princeton Alumni Weekly* with the permission of the Editor.